

Date: Wednesday, 1/11/2006 4:25:26 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 25456  
 Estimate Number : 10372  
 P.O. Number : N/A  
 This Issue : 1/11/2006 S.O. No. : N/A  
 Prsht Rev. : NC  
 First Issue : N/A Type : MACHINED PARTS  
 Previous Run : 25224  
 Written By : SEE COMMENT BELOW  
 Checked & Approved By : SEE COMMENT BELOW  
 Comment : Est. A04.02.09 New issue KJ/DS

Drawing Name : BOLT  
 Part Number : D312121  
 Drawing Number : D3121 REV C2  
 Project Number : N/A  
 Drawing Revision : C2  
 Material : N/A  
 Due Date : 2/8/2006

Qty: 94 Um: MS Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M303H0500 303 HEX BAR



Comment: Qty.: 0.0417 f(s)/Unit Total : 3.3360 f(s)  
 303 HEX BAR  
 Material: AISI 303 SS 1/2" Hex Bar  
 (M303H0.500)  
 Batch: M16140

ml 06/02/04 94

2.0 HARDINGE HARDINGE CNC LATHE SMALL



Comment: HARDINGE CNC LATHE SMALL  
 1-Turn D3121-21  
 2-Identify as D3121-21  
 3-Deburr break all sharp edges 0.005" to 0.010"

ml 06/02/04 94

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

ml 06/02/04 94

4.0 QC8 SECOND CHECK



Comment: SECOND CHECK

MS 06/02/05

5.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1  
 Identify and Stock  
 Location: Stores

SP 06/02/06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: DD Date: 06/02/07  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 1/11/2006 4:25:27 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BOLT

Job Number: 25456

Part Number: D312121

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

545 06/02/07



1206/02/07

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

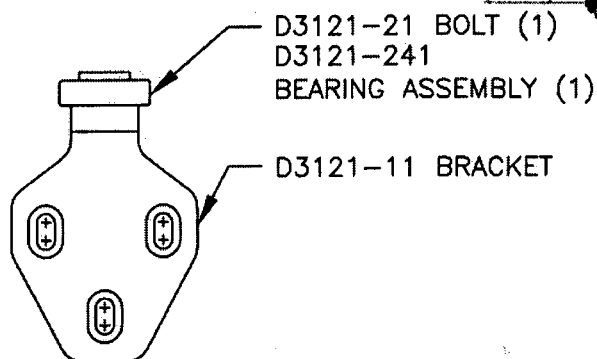
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3121	REV. C SHEET 1 OF 10
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:2
A	02.04.15	NEW ISSUE	
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146	
C	04.02.17	ADD CLEARANCE; USE -241 BEARING	
C1	CP # 04.03.26	3.97 WAS 4.00; 6.11 WAS 6.14	
C2	# 04.04.26	0.230 WAS 0.238	

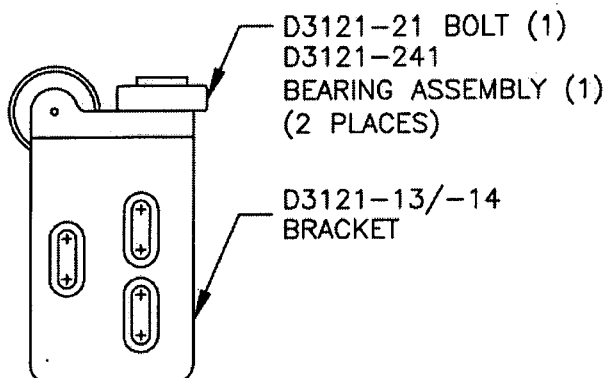
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04.03.01 #



D3121-21 BOLT (1)  
D3121-241  
BEARING ASSEMBLY (1)

D3121-11 BRACKET

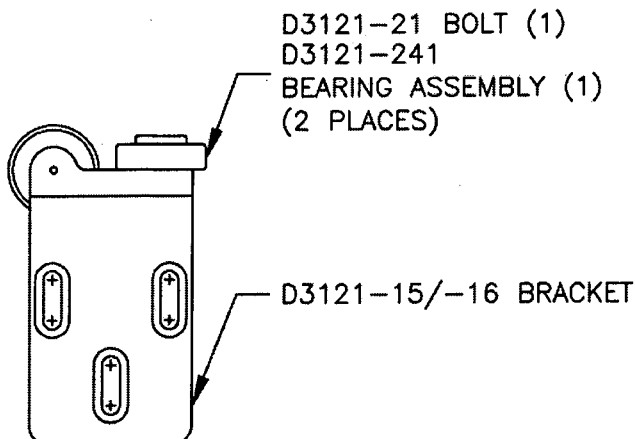
**D3121-041 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-33)



D3121-21 BOLT (1)  
D3121-241  
BEARING ASSEMBLY (1)  
(2 PLACES)

D3121-13/-14  
BRACKET

**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)  
BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-37/-38)



D3121-21 BOLT (1)  
D3121-241  
BEARING ASSEMBLY (1)  
(2 PLACES)

D3121-15/-16 BRACKET

**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)  
BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-35/-36)

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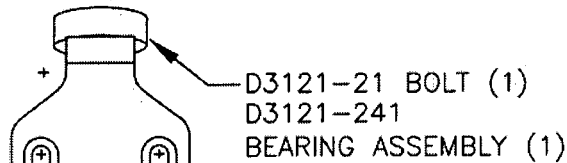
WORK ORDER  
NO. 25456

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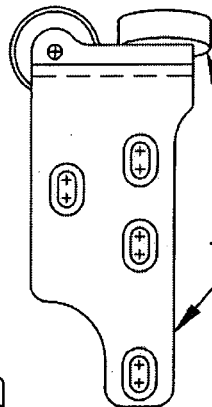
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CHECKED #	APPROVED #	DRAWING NO. D3121	REV. C SHEET 2 OF 10
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121-21 BOLT (1)  
D3121-241  
BEARING ASSEMBLY (1)

D3121-111 BRACKET

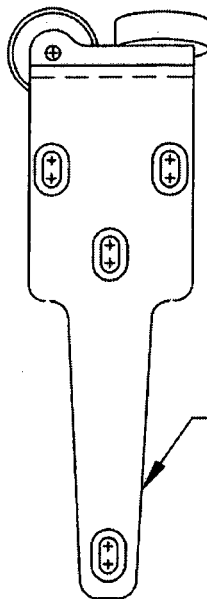
**D3121-141 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23001-01)



D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

D3121-113/-114 BRACKET

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

D3121-115/-116  
BRACKET

**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-05/-06)

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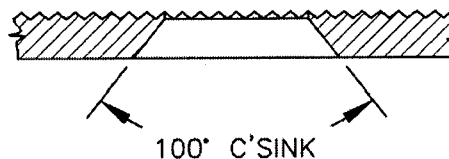
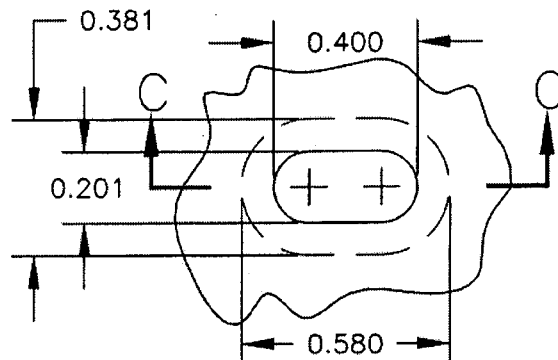
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DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

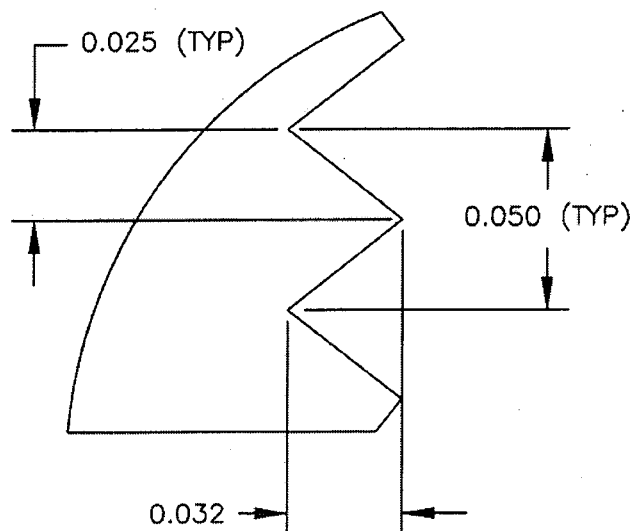
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04.03.01 #

**DETAIL A:**  
**SLOT DETAIL**  
SCALE 2:1  
VIEW ROTATED



**SECTION**  
**C-C**

**DETAIL B:**  
**RIDGE DETAIL**  
PARTIAL SECTION  
SCALE 1:20



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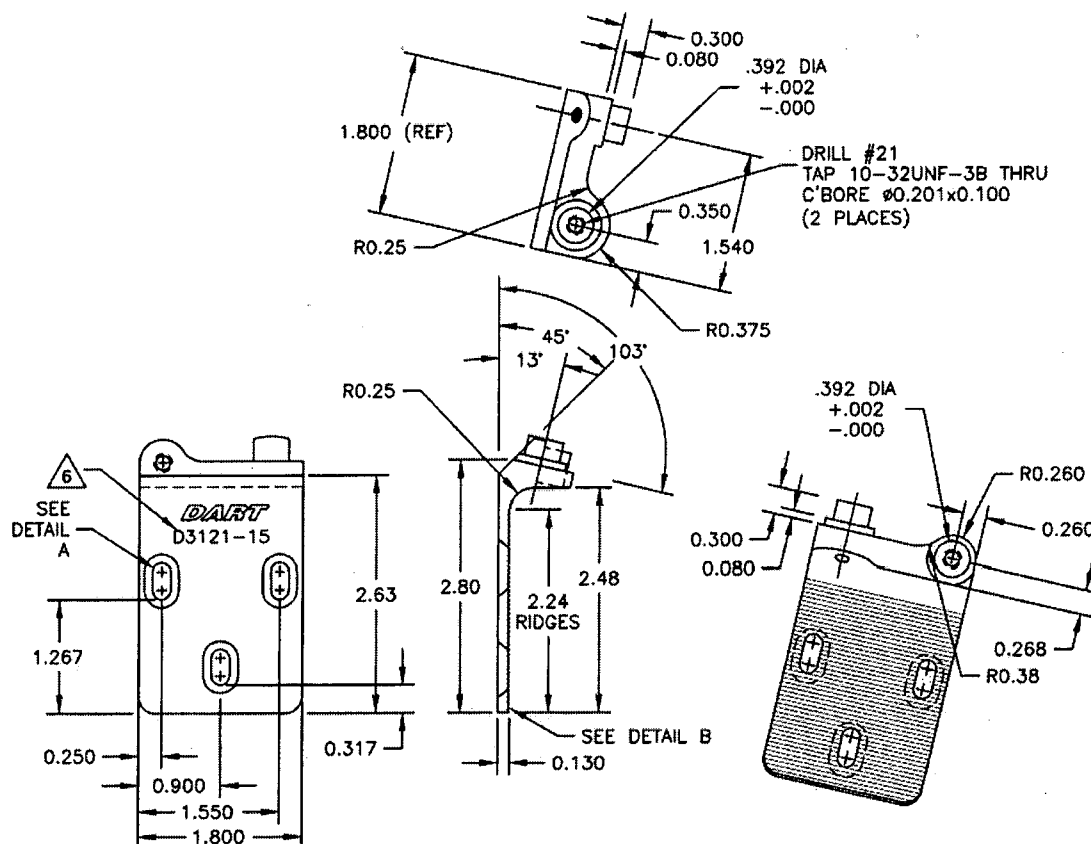
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DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2



**D3121-15 BRACKET (SHOWN)**  
**D3121-16 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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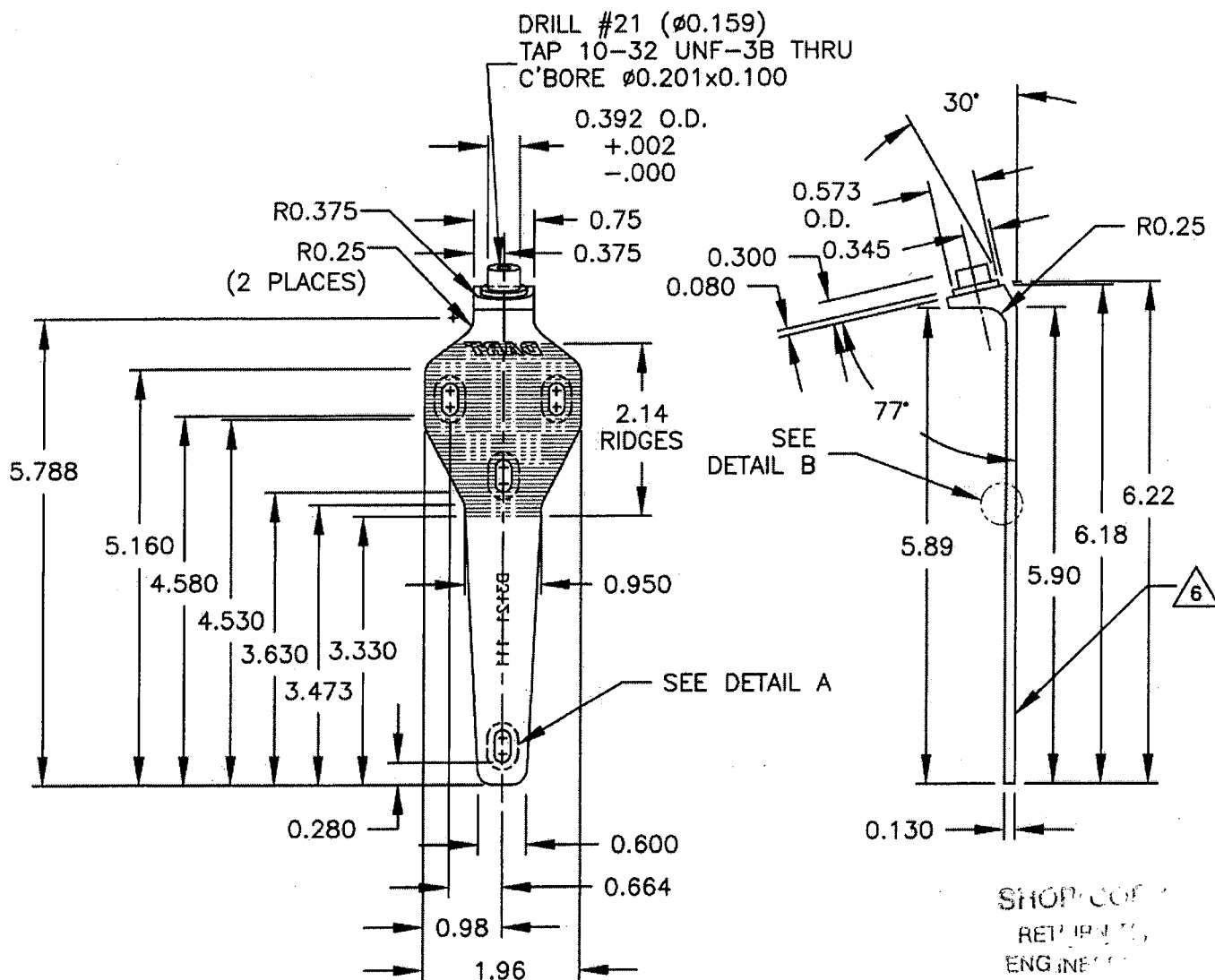
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DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2



#### D3121-111 BRACKET

- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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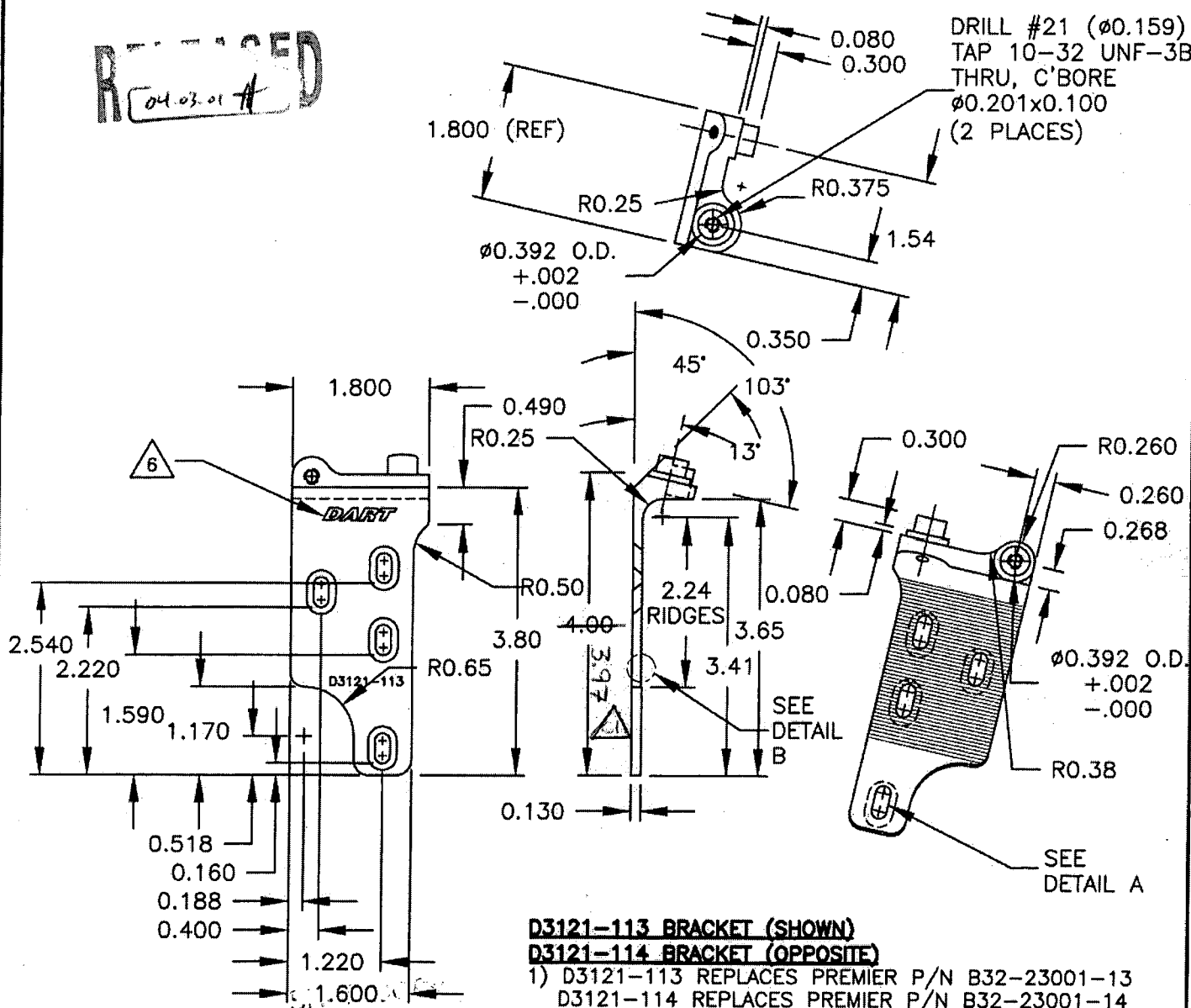
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DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2

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**D3121-113 BRACKET (SHOWN)**

**D3121-114 BRACKET (OPPOSITE)**

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13  
D3121-114 REPLACES PREMIER P/N B32-23001-14
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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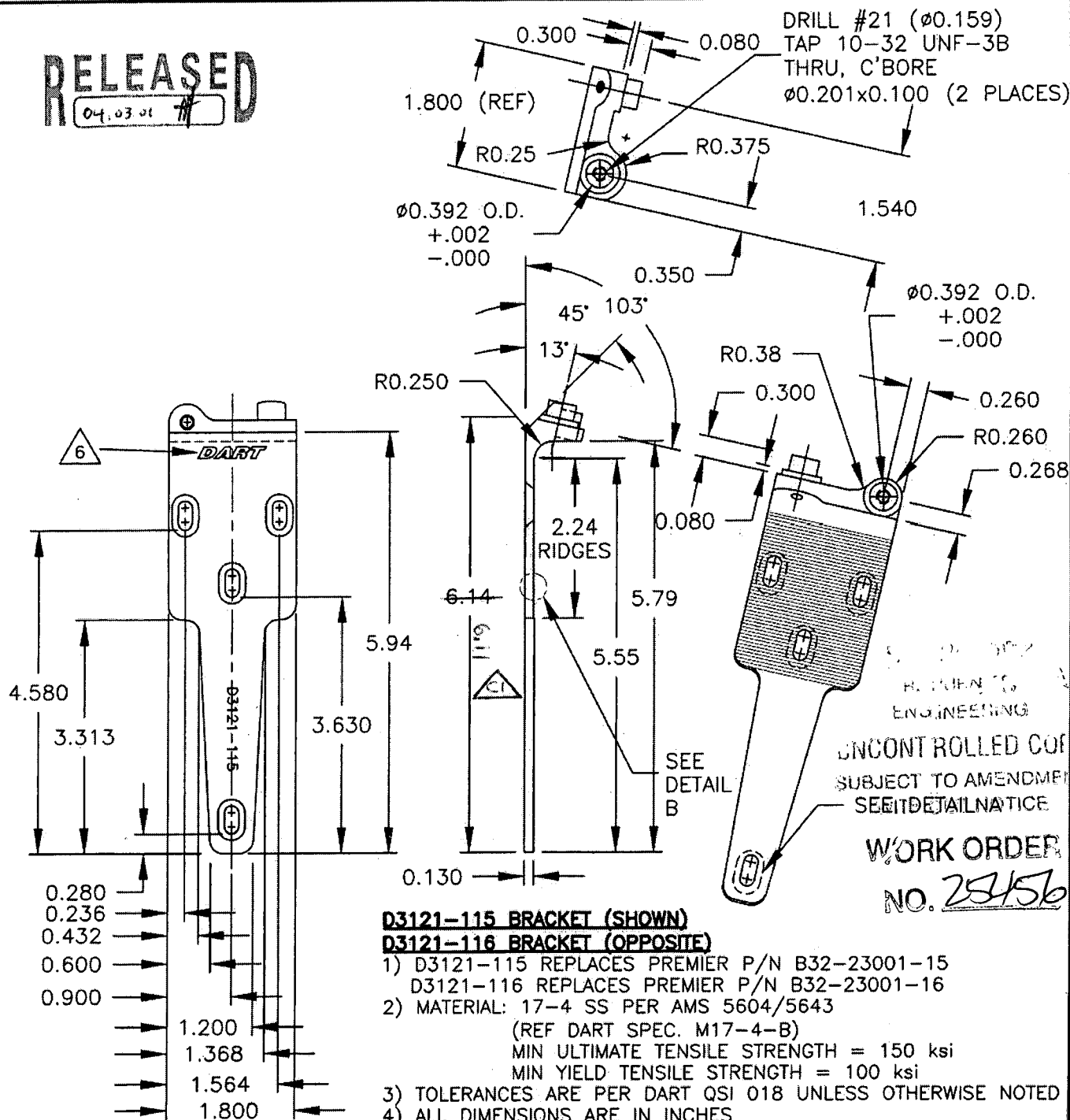
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DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2

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**D3121-115 BRACKET (SHOWN)**

**D3121-116 BRACKET (OPPOSITE)**

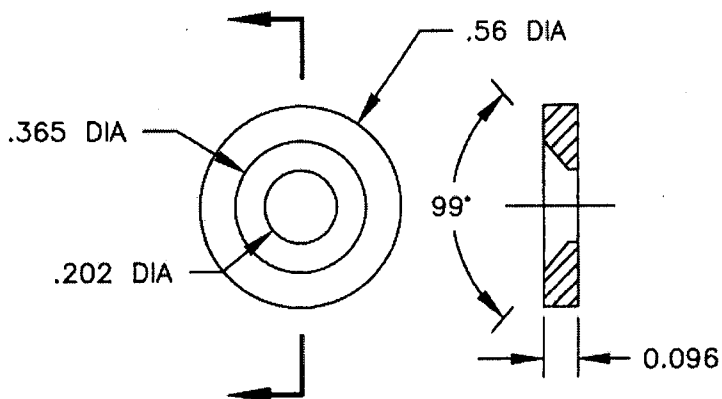
- 1) D3121-115 REPLACES PREMIER P/N B32-23001-15  
D3121-116 REPLACES PREMIER P/N B32-23001-16
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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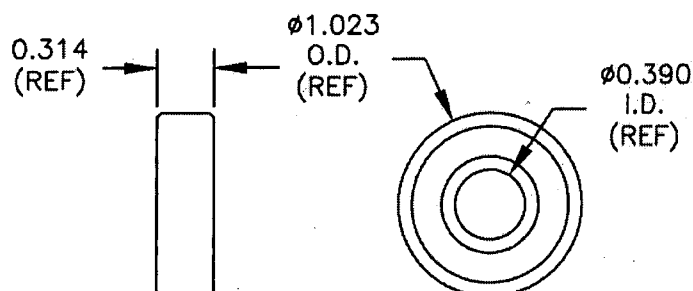
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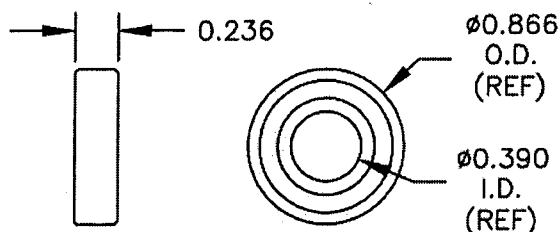
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CHECKED	APPROVED	DRAWING NO. D3121	REV. C SHEET 10 OF 10
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

**D3121-17 WASHER (SCALE 2:1)**

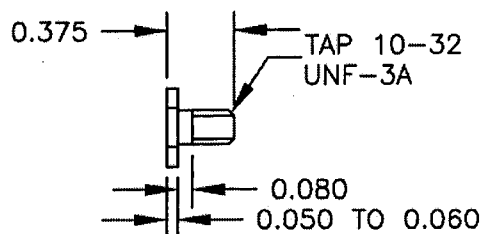
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

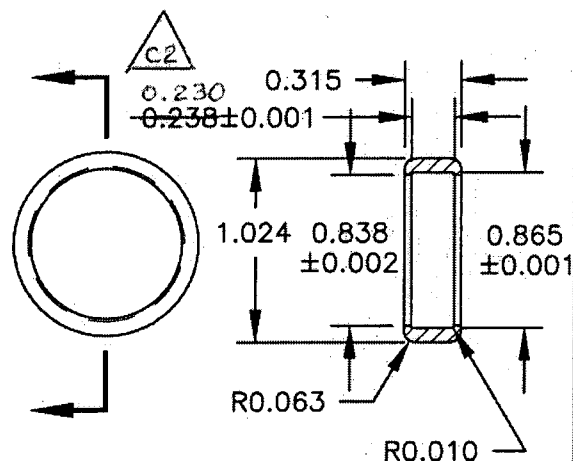
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

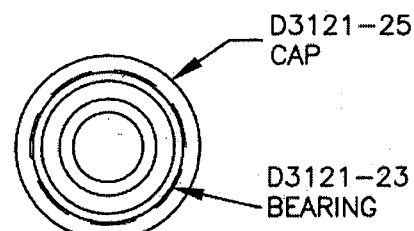
- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-2Z
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-21 BOLT (SCALE 1:1)**

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, Ø1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**

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WORK ORDER  
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